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Environmental Assessment
Land Exchange Between
Waterside Conservation LLC
and
Piscataway Park – National Park Service
U.S. Department of the Interior

September 16, 2004

ECC Project No. 03-6805

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1.0 EXECUTIVE SUMMARY

Piscataway Park, administered by the National Park Service ("NPS") is a 4,625-acre park which protects approximately 6 miles of the Potomac River shoreline from Piscataway Creek to Marshall Hall (in this document the "Park"). The view of the Maryland shore of the Potomac from Mount Vernon was preserved as a pilot project in the use of easements to protect parkland from obtrusive urban expansion. The project was begun in 1952 and Piscataway Park was established on October 4, 1961. Piscataway Park is comprised of five management units as described in the September 1983 General Management Plan: Marshall Hall, Accokeek, Mockley Point, Fort Washington Marina, and Piscataway Creek. The easement exchange is proposed for a portion of Piscataway Park which falls within the Piscataway Creek Management Unit and lies north of Piscataway Creek. The portion of the Piscataway Creek Management Unit located north of Piscataway Creek was acquired after preparation of the General Management Plan; the portion of the Piscataway Creek Management Unit north of Piscataway Creek and Fort Washington Marina comprises approximately 210 acres. The balance of Piscataway Park, including the management units Marshall Hall, Accokeek, Mockley Point, and Piscataway Creek south of the Piscataway Creek, comprises approximately 4,483 acres. Facilities provided in Piscataway Park south of Piscataway Creek include a picnic area, a dock and the National Colonial Farm. Facilities provided in Piscataway Park north of Piscataway Creek are limited to the Fort Washington Marina. A system of trails is planned. Recreational visits to Piscataway Park in FY 2002 totaled 263,233.

This Environmental Assessment has been prepared to evaluate the various alternatives regarding a proposed exchange of easements located within Piscataway Creek Management Unit, north of Piscataway Creek. Three alternatives are considered. Alternative 1, the "no action" alternative, evaluates the potential impacts to Park resources and values in the event the exchange is not consummated. Alternative 2 evaluates the potential impacts to Park resources and values in the event that an exchange of Easements 2 and 3 for Exchange Parcel 1 is consummated. Alternative 3 evaluates the potential impacts to Park resources and values in the event that an exchange of Easements 2 and 3 for Exchange Parcel 2 is consummated.

Waterside Conservation LLC is proposing to exchange Easements 2 and 3 described herein, available to the proposed Waterford Cove residential development, and located on NPS land within Piscataway Park's authorized boundary, for an approximately 21,002 square foot easement (Exchange Parcel 2). Exchange Parcel 2 is described herein and also lies on land currently owned by the NPS located within the boundary of Piscataway Park.

Alternative 3 is the preferred alternative as the proposed alignment of Exchange Parcel 2 was determined to impose least impacts to Park resources. Exchange Parcel 2 utilizes a previously disturbed corridor for a significant portion of its length, is aligned outside the boundaries of identified wetlands, does not contain any identified federal rare, threatened, or endangered plant species, and does not contain any identified archeological resources.

2.0 PURPOSE AND NEED FOR ACTION

2.1 Introduction

Public Law 87-362, enacted October 4, 1961, authorized the Secretary of the Interior to acquire lands and interests therein for Piscataway Park in order to preserve lands which comprise the principal viewshed from Mount Vernon and Fort Washington.

This Environmental Assessment (EA) will examine the alternatives and impacts of the exchange of two easements within Piscataway Park between the NPS and Waterside Conservation LLC. The alternatives explored were evaluated with the intention of protecting the Park's natural, cultural, and recreational resources and values. Any decisions regarding this proposed exchange will be made in accordance with all applicable federal statutes and policies.

2.2 Background

In 1952, a pilot project in the use of easements to protect parklands from obtrusive urban expansion was established to protect the viewshed from Mount Vernon and Fort Washington. Public Law 87-362, enacted October 4, 1961, established Piscataway Park. Today, the focus remains protecting the historic viewshed as well as preserving and interpreting the Park's significant natural and cultural resources and providing recreational opportunities for the public in accordance with the Organic Act of 1916.

Comprised of 4,625 acres, Piscataway Park preserves the viewshed for Mount Vernon and Fort Washington. The Park is located in Prince George's and Charles Counties, Maryland, and annually receives approximately 260,000 visitors who participate primarily in passive forms of recreation such as bird watching, fishing, hiking, picnicking, and wildlife viewing. Facilities include a picnic area, a dock, and the National Colonial Farm.

Until late 1994, Piscataway Park, with the exception of the Fort Washington Marina property (approximately 8.5 acres), was located solely on the south side of Piscataway Creek. The Park boundary was recently expanded by virtue of Public Law 103-350, approved October 6, 1994, to include 163 acres located north of Piscataway Creek, exclusively. In November 1995, NPS acquired a portion of the former Fort Washington Corporation property containing 102 acres and located along the slope north of Piscataway Creek. The acquisition by NPS was subject to the reservation of certain utility easements (for sanitary and storm water sewerage) by the Fort Washington Corporation to serve the future residential development of the Fort Washington Corporation's remaining property. Waterside Conservation LLC is the successor in title to the Fort Washington Corporation property.

Subsequent to the purchase of the Fort Washington Corporation property, NPS completed a minor boundary amendment in order to accept the donation of an additional 40 acres, designated for bald eagle habitat, located adjacent to the Waterside Conservation LLC property. The 210 acres of Piscataway Creek Management Unit located north of Piscataway

Creek do not contain any buildings or maintained recreational facilities. Access to Piscataway Creek Management Unit, north of Piscataway Creek is available solely by foot from adjoining neighborhoods. Piscataway Park, inclusive of the Piscataway Creek Management Unit, preserves the Mount Vernon and Fort Washington viewshed and provides natural habitat. The NPS estimates that the Piscataway Creek Management Unit, north of Piscataway Creek, exclusive of the Fort Washington Marina Management Unit, does not experience extensive use by visitors.

Waterside Conservation LLC acquired a 132.26-acre parcel of land situated south of Old Fort Road and east of Washington Drive in Prince George's County, Maryland in 1999. Subsequently 40 acres of that parcel were donated to NPS in 2001 and designated as bald eagle habitat. The existing Waterside Conservation LLC parcel, consisting of 92.29-acres, carries with it certain easements for storm and sanitary sewerage across NPS property. Easements 2 and 3 are aligned approximately north-south, extending from the southern boundary of the planned Waterford Cove residential development, which coincides with the northern boundary of the Park, and converging near the north shoreline of Piscataway Creek.

2.3 Scope of Project

Waterside Conservation LLC proposes an exchange in which all of Easements 2 and 3 would be relinquished. In exchange, Waterside Conservation LLC requests the grant of a right-of-way for a storm sewer and appurtenances (Exchange Parcel 2) which extends south from the southeast corner of the Waterside Conservation LLC parcel and terminates approximately 650 feet south of the Waterside Conservation LLC property line.

Easements 2 and 3 comprise approximately 40,300 square feet (0.925 acre); Exchange Parcel 2 comprises 21,002 square feet (0.4821 acre). Legal descriptions of Easements 2 and 3 and Exchange Parcel 1 and a map of Exchange Parcel 2 are provided in Appendices A, B, and C, respectively. A site vicinity map is presented as Figure 1; a site plan which depicts the study area including all existing Easements and Exchange Parcels is presented as Figure 2.

The proposed exchange will allow provision of storm water management services to the planned Waterford Cove residential development in a manner that imposes fewer impacts on Piscataway Park than use of existing easements. Information concerning Piscataway Park is provided for general context only as the proposed land exchange will not impact the Marshall Hall, Accokeek, Mockley Point, or Fort Washington Marina Management Units of Piscataway Park.

A storm drain and paving plan for the Waterford Cove development (concept 38989-2002-01) was originally prepared by Loiderman Soltesz Associates, Inc., (Loiderman) of Lanham, Maryland, and presented to Prince George's County Department of Environmental Resources (DER). Due to the presence of Marlboro Clays, the DER originally waived all requirements for stormwater management.

Subsequently, application was made to the Maryland Department of the Environment (MDE) for discharge of stormwater to wetlands. MDE responded that a Water Quality (WQ) facility must be provided. Loiderman met with DER and MDE and later prepared stormwater management plans for the Waterford Cove development (concept 8776-2004-00) in conformance with MDE and DER comments.

As per the MDE and DER the proposed offline WQ facility is designed for 1 inch of runoff from the proposed impervious areas of the development (236,720 square feet or 5.4 acres). Pond inflow and control structures were sized for the flow influence from a 100-year storm event which would yield a design discharge of 21.23 cubic feet per second. The stormwater management pond is deemed a type "a" dam since it poses no downstream hazard to existing dwellings or roadways. In addition, a rip-rap plunge pool was added at the stormwater outfall as a mitigation measure to prevent downgradient erosion. All design plans for stormwater management at the Waterford Cove development are presented in Exhibit A.

2.4 Project Objectives

The project objectives are to:

1. Provide for the exchange of easement interests with NPS.

2. Provide services to the planned Waterford Cove residential development in a manner that imposes least impacts on Piscataway Park than use of existing easements.

3. Cooperate with federal, state, and local agencies to ensure the present and future protection of lands within Piscataway Park's authorized boundary.

2.5 Policy

The Land and Water Conservation Fund Act of 1964, Part D-Land Transfers, authorized the Secretary of the Interior to exchange or dispose of federal lands.

Title 16 United States Code, Subchapter LXIX-Outdoor Recreation Programs

Part D-Land Transfers

Statute 460*l*-22 (b) Exchange of lands; other disposal; equal land values

The Secretary of the Interior is authorized to accept title to any non-Federal property or interest therein within a unit of the National Park System or miscellaneous area under his administration, and in exchange therefore he may convey to the grantor of such property or interest any Federally-owned property or interest therein under his jurisdiction which he determines is suitable for exchange or other disposal and which is located in the same State as the non-Federal property to be acquired: Provided, however, that timber lands subject to harvest under a sustained yield program shall

> *not be so exchanged. Upon request of a State or a political subdivision thereof, or of a party in interest, prior to such exchange the Secretary or his designee shall hold a public hearing in the area where the lands to be exchanged are located. The values of the properties so exchanged, either shall be approximately equal, or if they are not approximately equal, the values shall be equalized by the payment of cash to the grantor from funds appropriated for the acquisition of land for the area, or to the Secretary as the circumstances require.*

The National Environmental Policy Act (NEPA) (1969, as amended) requires all federal agencies to carefully consider the environmental impacts of a proposed project that may affect the human environment. NEPA requires a full and honest disclosure of all environmental impacts associated with actions that have unknown or potential significant environmental impacts and consideration of reasonable alternatives to a proposed action.

The Archeological Resources Protection Act of 1979 (ARPA) requires a permit to remove archeological resources from federal or Indian lands. Permits may be issued to educational or scientific institutions, only if removal would increase knowledge about archeological resources.

The Archeological and Historic Preservation Act of 1974 authorizes federal agencies to protect historical and archeological data that might be lost as a result of construction of irrigation projects, a dam, or other federal activity.

The Endangered Species Act (1978, as amended) requires all federal agencies to evaluate potential impacts to federally listed rare, threatened, or endangered species that may result during a proposed project.

3.0 ALTERNATIVES

3.1 Alternative 1 – No Action

No exchange of easement interests between NPS and Waterside Conservation LLC would occur. Direct impacts from this action are:

- The planned Waterford Cove residential development would utilize Easements 2 and 3, planned for both water and sewer, which currently pass through the Chesapeake Bay Critical Area (defined by the Critical Area Commission for the Chesapeake and Atlantic Coastal Bays as all land within 1,000 feet of the mean high water line of tidal waters or the landward edge of tidal wetlands and all waters of and lands under the Chesapeake Bay and its tributaries). A legal description of Easements 2 and 3 is included in Appendix A.

3.2 Alternative 2 – Exchange of Easements 2 and 3 for Exchange Parcel 1

Exchange of Easements 2 and 3 for Exchange Parcel 1 would occur. Direct impacts from this action are:

- Provision of services to the planned Waterford Cove residential development in a manner that imposes fewer impacts on Piscataway Park, Piscataway Creek Management Unit than existing Easements 2 and 3 which were planned for both water and sewer. A legal description of proposed Exchange Parcel 1 is presented in Appendix B.

- The Chesapeake Bay Critical Area would not be encroached upon, however, the alignment of Exchange Parcel 1 descends a very steep slope and would likely have significant erosion potential even with significant anti-erosion measures.

- Exchange Parcel 1 would potentially encroach upon a portion of NPS land that was specifically set aside for bald eagle habitat.

- Other potential impacts, including hydrology, wetlands, rare, threatened, and endangered plants, and archeological and cultural resources were not considered because this alternative was discounted during early discussions with the NPS.

3.3 Alternative 3 – Preferred Alternative – Exchange of Easements 2 and 3 for Exchange Parcel 2

Exchange of Easements 2 and 3 for Exchange Parcel 2 would occur. This alternative is preferred. The alignment of Exchange Parcel 2 was specified by NPS staff and was chosen specifically to minimize impacts to the environment; a majority of the proposed easement follows a previously disturbed alignment. Direct impacts from this action are:

- Provision of storm water services (sanitary sewer services will utilize existing facilities off of NPS property) to the planned Waterford Cove residential development in a manner that imposes the least impacts on Piscataway Park - North than existing Easements 2 and 3 which were planned for both water and sewer. A map of Exchange Parcel 2 is presented in Appendix C.

- Utilization of the smallest affected total area (21,002 square feet), the majority of which was previously disturbed.

- All construction would be performed outside wetland areas as documented by Wetlands Studies and Solutions and confirmed by the Nontidal Wetlands and Waterways Division of the Water Management Administration of the Maryland Department of the Environment, however the Chesapeake Bay Critical Area would be encroached upon.

- Federal rare, threatened, or endangered species would not be encroached upon as none have been identified or documented in the site vicinity by Maryland Department of Natural Resources. Four species of plants listed on the State of Maryland rare, threatened, or endangered species list may be affected as documented in a *Rare, Threatened, and Endangered Plant Search* prepared Wetlands Studies and Solutions, Inc.

- Archeological resources would not be affected as documented in a *Phase I Archeological Survey* prepared by URS Corporation, Inc.

4.0 DESCRIPTION OF THE ENVIRONMENT

Exchange Parcel 2 (hereinafter also referred to as the "Subject Site") is located within Piscataway Park in Prince George's County, Maryland. Piscataway Park consists of approximately 4,625 acres of mixed hardwood forest within a portion of the Piscataway Creek watershed and lies within the Coastal Plain Physiographic Province. Typical of the Coastal Plain in areas near large waterbodies, the topography of the Park includes moderate to quite steep slopes which are cut by stream valleys and drainage ravines. Elevations within the Park range from about sea level to approximately 180 feet above sea level. The Coastal Plain consists of stratified marine sediments of sand, silt, clay and gravel.

4.1 Topography and Drainage

The topography of the Subject Site slopes to the south towards Piscataway Creek. The general direction of surface runoff on the Subject Site is directed toward the south. The topographic high point within the vicinity of the Subject Site, relative to mean sea level, is approximately 197 feet; the topographic low point is approximately 10 feet.[1] In places, the natural topography on the Subject Site area has been altered during grading activities associated with the construction of dredge settlement basins previously utilized on the Waterside Conservation LLC property, in conjunction with the dredging of the Piscataway Creek channel. That portion of the Mount Vernon USGS topographic map which depicts the Subject Site and vicinity is presented as Figure 1.

There are no surface water features within the boundary of the Exchange Parcel 2. Surface water features within the vicinity of the Subject Site are limited to Pockett's Branch, a tributary of Piscataway Creek. Pockett's Branch flows approximately north to south just east of the Subject Site.

According to National Flood Insurance Program mapping, the Subject Site area is located in flood zones A6, B, and C.[2] Upland areas and slopes are mapped as Zone C, defined as areas of minimal flooding. Bottom lands and land adjacent to the unnamed tributary to Piscataway Creek are mapped as Zones B and A6, defined as areas between the limits of the 100-year and 500-year flood and areas of 100-year flood where the base flood elevation and flood hazard factors have been determined, respectively.

Wetlands are found along the southern one-third of Pockett's Branch and Piscataway Creek. Wetlands are discussed in detail within Section 4.4.

[1] USGS 7.5-minute Topographic Quadrangle Maps, Mount Vernon, Virginia and Maryland, 1966 (photorevised 1983).

[2] U.S. Department of Housing and Urban Development, Federal Insurance Administration, *Flood Insurance Rate Map, Community Panel 245208-0095C*, effective June 18, 1987.

4.2 Geology and Soils

The Subject Site is located within the Coastal Plain Physiographic Province, generally described as an eastward dipping wedge of unconsolidated, clastic sediments ranging in age from Miocene (24 million years ago) to Recent. The thickness of the Coastal Plain ranges from a feather-edge at the western limit to more than 3,500 feet at the outermost portion. These Coastal Plain sediments are unconformably underlain by metamorphic and igneous rocks of Cambrian age (500-570 million years ago). As mapped by the Maryland Geological Survey, the Subject Site is underlain by Upland Deposits (Western Shore), the Nanjemoy Formation, and the Aquia Formation.[3] That portion of the Geologic Map of Maryland which depicts the Subject Site and vicinity is presented as Figure 3.

The Upland Deposits (Western Shore) consist of gravel and sand, commonly orange-brown, locally limonite-cemented, with minor silt and red, white, or gray clay (includes Brandywine, Bryn Mawr, and Sunderland Formations of earlier reports). It ranges in thickness from 0 to 50 feet.

The Nanjemoy Formation consists of dark green to gray argillaceous, glauconitic, fine- to medium-grained sand; minor gray to pale brown clay. A Marlboro Clay Member at the base consists of pink to gray, homogenous plastic clay with local lenses of very fine-grained white sand. The Marlboro Clay Member ranges in thickness from 0 to 30 feet and is present west of Chesapeake Bay only. The Nanjemoy Formation ranges in thickness from 0 to 125 feet.

The Aquia Formation consists of dark green to gray-green, argillaceous, highly glauconitic, well sorted fine- to medium-grained sand and is locally indurated with shell beds. It ranges in thickness from 0 to 100 feet.

According to the Prince George's County Soil Survey, the Subject Site is underlain by the Sassafras-Croom association and the Bibb Tidal marsh association.[4] The Sassafras Croom association is described as gently sloping to steep, well-drained, dominantly gravelly soil, some with a compact subsoil and substratum. The Bibb Tidal marsh association is comprised of alluvial soil of the floodplains and is potentially hydric. That portion of the Prince George's County Soil Survey which depicts the Subject Site and vicinity is presented as Figure 4.

4.3 Site History

In May of 1986, the Maryland Department of Natural Resources issued wetlands license #87-137 for activities to be performed in conjunction with planned rehabilitation of the Fort Washington Marina located west of the Subject Site. The planned rehabilitation activities included replacement of piers, boat slips, and bulk heads, installation of new boat ramps and hoists, and dredging of the existing channel in Piscataway Creek to remove approximately 100,000 cubic yards of material from the creek bottom. The dredging was performed in

[3] *Geologic Map of Maryland*, 1968.

[4] United States Department of Agriculture, Soil Conservation Service, Issued April 1967.

stages between January 27, 1988, the effective date of the wetlands license, and January 27, 1994, the termination date.

The dredged material was pumped via pipeline and placed within settlement basins on the western portion of the Waterside Conservation LLC site. Effluent water from the dredge material settlement operation was then drained via an overland pipe back to Piscataway Creek. The effluent water pipeline, which is still in place, follows an alignment which crosses NPS property and closely matches the alignment of Exchange Parcel 2.

4.4 Wetlands and Floodplains

4.4.1 Wetland Delineations

Wetlands are present within the vicinity of the Subject Site, however, wetlands were not identified within the boundaries of Exchange Parcel 2. Wetland Studies and Solutions, Inc. has prepared four reports for the Subject Site and adjacent areas which are briefly described below. Wetland delineations performed by Wetland Studies and Solutions, Inc. were performed pursuant to the "Corps of Engineers Wetlands Delineation Manual," Technical Report Y-87-1 (1987 Manual). Wetland delineations prepared by Wetland Studies and Solutions are provided in Exhibit B for reference.

The first report, published on November 26, 2002, documented wetlands on the Waterside Conservation LLC property.[5] Wetlands encountered during this delineation included PEM (Palustrine Emergent Wetland), R3 (Riverine Perennial), and R4 (Riverine Intermittent). Wetland designated PEM documented during this study are resultant from the dredge material settlement operation, are significantly removed from the Subject Site, are not considered jurisdictional, and are currently in the process of being reclaimed for redevelopment purposes. Wetlands designated R3 and R4 are included in a stream system consisting of several jurisdictional streams identified on the easternmost portion of the Waterside Conservation LLC property.

The second and third reports, published October 2, 2003, and March 18, 2004, (the third report is a revision of the second), documented wetlands within the vicinity of Exchange Parcel 1.[6] [7] Wetlands encountered during these delineations included PFO (Palustrine Forested Wetland), PSS (Palustrine Scrub-Scrub Wetland), and R3 (Riverine Perennial).

[5] Wetland Studies and Solutions, Inc., *Wetland Delineation, Waterford Cove (±92 acres), Prince George's County, Maryland*, November 26, 2002.

[6] Wetland Studies and Solutions, Inc., *Wetland Delineation, Waterford Cove Additional Sewer, Prince George's County, Maryland*, October 2, 2003.

[7] Wetland Studies and Solutions, Inc., *Wetland Delineation, Waterford Cove Additional Sewer (±2.5 acres) Prince George's County, Maryland*, March 18, 2004.

The fourth report, published on April 30, 2004, documented wetlands within the vicinity of Exchange Parcel 2 (the Subject Site).[8] Wetlands encountered during this delineation included PFO (Palustrine Forested Wetland), PSS (Palustrine Scrub-Scrub Wetland), and R3 (Riverine Perennial). Figure 5 presents the findings of the April 30, 2004, wetland delineation.

On June 4, 2004, Wetland Studies and Solutions, Inc. submitted an application for an activity in a floodplain, waterway, nontidal wetland or buffer to the Nontidal Wetlands and Waterways Division of the Water Management Administration (WMA) of the Maryland Department of the Environment. Ms. Cynthia C. Nethen, Project Manager for the WMA, responded on July 15, 2004, indicating that preliminary review had been completed in coordination with the U.S. Army Corps of Engineers (USACE). Based on the June 4, 2004, plan, the WMA determined that the project will have no impact to nontidal wetlands, nontidal wetland buffers, streams or the 100-year floodplain, and therefore, the project is exempt and does not require authorization from the WMA or the USACE. A copy of Ms. Nethen's letter is included as Appendix D.

According to National Flood Insurance Program mapping the site area is located in flood zones A6, B, and C.[9] Upland areas and slopes are mapped as Zone C, defined as areas of minimal flooding. Bottom lands and land adjacent to the unnamed tributary to Piscataway Creek are mapped as Zones B and A6, areas between the limits of the 100-year and 500-year flood and areas of 100-year flood where the base flood elevation and flood hazard factors have been determined, respectively.

4.4.2 Maryland Critical Areas Commission

The Subject Site lies, in part, within the boundaries of the Chesapeake Bay Critical Area (CBCA). The website http://www.dnr.state.md.us/criticalarea/ provided the following description of the CBCA:

> In 1984, to safeguard the Bay from the negative impacts of intense development, the Maryland General Assembly enacted the Chesapeake Bay Critical Area Protection Program, a far-reaching effort to control future land use development in the Chesapeake's watershed. The ribbon of land within 1,000 feet of the tidal influence of the Bay was determined to be crucial because development in this "critical area" has direct and immediate effects on the health of the Bay.
>
> The Chesapeake Bay Critical Area Commission was charged with devising a set of criteria which would minimize the adverse effects of human activities on water quality and natural habitats and would foster consistent, uniform and more sensitive development activity within the Critical Area. In cooperation with the Critical Area Commission, local critical area management programs are administered by the 61 local governments whose jurisdiction are partially or entirely within the Critical Area.

[8] Wetland Studies and Solutions, Inc., *Wetland Delineation, Waterford Cove Alternate Outfall, Prince George's County, Maryland*, April 30, 2004.

[9] U.S. Department of Housing and Urban Development, Federal Insurance Administration, *Flood Insurance Rate Map, Community Panel 245208-0095C*, effective June 18, 1987)

Ms. Lisa Hoerger of CBCA Commission was contacted and asked for consultation on the proposed utilization of Exchange Parcel 2. Ms. Hoerger responded to an initial submission of project design materials with a letter dated June 10, 2004. The June letter required several items in order to complete the review including the following:

- Area disturbed, graded, and cleared both inside and outside the 100-foot or expanded Buffer inside the Critical Area.
- Nontidal wetlands disturbed.
- Documentation as to whether the site supports any threatened or endangered species habitat. Absent other sources, the Maryland Department of Natural Resources, Heritage and Biodiversity Division, typically provides this documentation. The contact at that office is Ms. Lori Byrne and her telephone number is (410) 260-8573.

ECC contacted Ms. Byrne and in response a letter regarding endangered species at the site was provided. A summary of that letter is provided in Section 4.6.2; the letter from Ms. Byrne is included within Appendix E.

Ms. Hoerger provided a final review letter on July 20, 2004, after conversations with Mr. Richard Thompson PG DER and Mr. Jim Stasz, MNCPPC, among others, and review of Ms. Byrne's letter. Ms. Hoerger's July letter indicated the following:

- That "the installation of the stormwater pipe and outfall should not create the need for clearing and should only result in temporary disturbance to the abandoned road."
- That while two endangered plant species were identified by MD DNR as being present on the site, "Prince George's County reviewers assured [her] that these plant habitats would not be impacted."
- That the only other sensitive species identified in the MD DNR letter "was the possible presence of Forest Interior Dwelling Birds (FIDs)."

Ms. Hoerger indicated that since the site likely supports FIDs, any development activities associated with the installation of the stormwater pipe and outfall should occur outside the breeding season. Therefore, activities should not occur between April and August. Additionally, if any canopy is removed as a result of placement for the stormwater pipe and outfall, then FID mitigation may be required. If no canopy loss occurs, mitigation for compliance with Maryland's Critical Area Law is not required for this project. Lastly, Ms. Hoerger requested a copy of the completed Environmental Assessment in order to have the opportunity to comment, if necessary. Correspondence with Ms. Hoerger of the CBCA Commission is presented within Appendix F.

4.5 Biological Resources

The variety of ecological systems found in the Subject Site area was catalogued in *Biological Inventories at Three National Park Service Sites in the National Capitol Region, Final Report* published in May 2000 (hereinafter the *Biological Inventories Report*).[10] That report documented flora in an area which encompassed 107 acres and is referred to as the

[10] Chris Athanas, Ph.D. & Associates, Inc., *Biological Inventories at Three National Park Service Sites in the National Capitol Region. Final Report*, May 2000.

Piscataway Annex. Piscataway Annex includes the Subject Site and is a portion of Piscataway Park within the Piscataway Creek Management Unit, located north of Piscataway Creek. The *Biological Inventories Report* describes Piscataway Annex as including upland forest and a much smaller area of wetland forest, with a small amount of tidal riverine areas. Surveys of herptiles (reptiles and amphibians) and mammals were not performed within the Piscataway Annex. Instead, they were performed in that portion of Piscataway Park which lies south of Piscataway Creek.

The basis of most of the information provided in this Section and Section 3.6 pertaining to fauna is largely taken from the *Biological Inventories Report*, however, it should be noted that the *Biological Inventories Report* did not study fauna in the Piscataway Annex. In an effort to create a more complete picture of the fauna found in the Subject Site area, information regarding rare, threatened and endangered fauna species was requested from both the U.S. Fish and Wildlife Service and the Maryland Department of Natural Resources. Summaries of those requests and responses are presented in Section 4.6. The *Biological Inventories Report* is included in Exhibit C.

4.5.1 Vegetation Species

The *Biological Inventories Report* documented 189 herbaceous species in 145 genera, and 77 woody species in 51 genera. Eight of the identified species were listed on the global, federal, or state lists of rare, threatened, or endangered species as indicated in Table 1.

Table 1 - Rare, Threatened, or Endangered Vegetation Species.

Scientific Name	Common Name	Global Rank; State Rank / Status – Year 2000	Global Rank; State Rank / Status – Year 2003[11]
Arisaema dracontium	Green dragon	G5; S3	Not Listed
Bidens coronata	Tickseed-sunflower	G5; S2/S3	G5; S2/S3
Carex albursina	White bear sedge	G5; S3	G5; S3
Commelina virginica	Virginia dayflower	G5; S3	Not Listed
Myosotis macrosperma	Large-seeded forget-me-not	G5; S1; T	G5; S2/S3
Nemophila aphylla	Small-flowered Baby-blue-eyes	G5; S1	G5; S1
Ranunculus micranthus	Small-flowered crowfoot	G5; S3	Not Listed
Scutellaria galericulata	Marsh skullcap	G5; S1	G5; S1
Fraxinus profundo	Pumpkin ash	G4; S2/S3	G4; S2/S3
Global Rank ranges from G1 to G5 with G1 indicating critically imperiled [species] globally because of extreme rarity. State Rank ranges from S1 to S5, with S1 indicating critically imperiled [species] in Maryland because of extreme rarity. State Status includes "E" = endangered species, and "T" = threatened species			

The *Biological Inventories Report* documented that *Myosotis macrosperma, Nemophila aphylla,* and *Ranunculus micranthus* are widespread and reproducing on the site.

[11]Maryland Department of Natural Resources, Wildlife and Heritage Service, Natural Heritage Program, *Rare, Threatened, and Endangered Plants of Maryland*, December 2003.

During a recent wetland delineation, Wetland Studies and Solutions, Inc., of Chantilly, Virginia, reported observation of Small-flowered Baby-blue-eyes (*Nemophila aphylla*), a state rare plant with an S1 rating, on the Subject Site and surrounding areas. In response to the *Nemophila aphylla* observation in the vicinity of the Subject Site a *Rare, Threatened, and Endangered Plant Search* was performed by Wetlands Studies and Solutions, Inc. The results of the *Rare, Threatened, and Endangered Plant Search* are presented in Section 4.6.1; the full report is presented in Exhibit C.

4.5.2 Herptile and Mammal Species

The *Biological Inventories Report* documented 16 observed or reported amphibians of 23 expected species, 19 observed or reported reptiles of 27 expected species, and 19 observed or reported mammals of 28 expected species within Piscataway Park.

4.6 Endangered Species

Background information regarding endangered species at Piscataway Park, south of Piscataway Creek, obtained from the U.S. Department of the Interior, National Parks Service, National Capital Parks - East (NPS-NCPE) website http://www.nps.gov/pisc/ indicated the presence of 70 rare, threatened, or endangered flora species.

In addition, the NPS-NCPE website indicated that, among the rare, threatened, and endangered fauna are several extant amphibian populations that are not known to inhabit any National Parks in Maryland other than Piscataway Park. These include the Northern Cricket Frog (*Acris crepitans*), Cope's Gray Tree Frog (*Hyla chrysocelis*), Green Tree Frog (*Hyla cinerea*), Wood Frog (*Rana sylvatica*), and the Eastern Spadefoot Toad (*Scaphiopus holbrookii*). The Upland Chorus Frog (*Pseudacris triseriata feriarum*) is restricted to a single community within the Park, as is the Four-toed Salamander (*Hemidactylium scutatum*). It should be noted, however, that none of these species appears in the Maryland Department of Natural Resources publication entitled *Rare, Threatened, and Endangered Animals of Maryland*.[12] The NPS-NCPE website further indicated that portions of the Park's shoreline provide a habitat for eight species of freshwater mussels, including three endangered species.

The bald eagle (*Haliaeetus leucocephalus*), a federally listed threatened species, is known to nest in portions of Piscataway Park; a 40-acre tract of land, designated as bald eagle habitat, is located immediately adjacent and north of the Subject Site.

4.6.1 Vegetation Species

As indicated in Section 3.5.1, observation of *Nemophila aphylla* within the Subject Site area triggered performance of a *Rare, Threatened, and Endangered Plant Search*. Wetlands Studies and Solutions, Inc., of Chantilly, Virginia, performed a federal and state listed rare, threatened, and endangered plant search within the area of the Subject Site and downgradient

[12] Maryland Department of Natural Resources, Wildlife and Heritage Service, Natural Heritage Program, *Rare, Threatened, and Endangered Animals of Maryland*, December 2003.

of the outfall area extending to Piscataway Creek on May 25-26, 2004. Results of the plant search indicated the following:

- No federally threatened or endangered plants were found within the Subject Site.
- Four species of vascular plants listed on the State of Maryland's rare, threatened, or endangered plant list were identified in the vicinity of the Subject Site. These four species are presented within Table 2.

Table 2 - Identified Vegetation Species.

Scientific Name	Common Name	Global Rank; State Rank; Status
Carex albursina	White bear sedge	G5; S3
Myosotis macrosperma	Large-seeded forget-me-not	G5; S2/S3
Nemophila aphylla	Small-flowered Baby-blue-eyes	G5; S1
Matelea *	(*carolinensis*) Angelpod (*decipiens*) Old-field milkvine (*gonocarpos*) Angular-fruited milkvine (*obliqua*) Climbing milkweed	G4; S1; E G5: SH; X G5: S1? G4?: S1; E
* Could not be identified to species level due to lack of flowering or fruiting. Global Rank ranges from G1 to G5 with G1 indicating critically imperiled [species] Globally because of extreme rarity. State Rank ranges from S1 to S5, with S1 indicating critically imperiled [species] in Maryland because of extreme rarity. SH = Historically known in Maryland. State Status includes "E" = endangered species, "T" = threatened species, and "X" = endangered extripated.		

The Wetland Studies *Rare, Threatened, and Endangered Plant Search* also confirmed the earlier assertion of the *Biological Inventories Report* that *Nemophila aphylla* and *Myosotis macrosperma* are widespread and reproducing on the site. A review of all reports indicates that the only rare, threatened, or endangered plant found within the Subject Site area that is not documented as being found abundantly in the vicinity of the Subject Site is the unidentified species of *Matelea*. It should be noted that the rare plants search which identified *Matelea* did not extend beyond the Subject Site boundary onto adjacent mesic forested upland slopes; in all likelihood *Matelea* is found in the vicinity of the Subject Site area on mesic forested upland slopes outside the boundaries of Exchange Parcel 2. Figure 6 presents the findings of the Wetlands Studies *Rare, Threatened, and Endangered Plant Search*.

4.6.2 Herptile and Mammal Species

The *Biological Inventories Report* documented 16 observed or reported amphibians of 23 expected species, 19 observed or reported reptiles of 27 expected species, and 19 observed or reported mammals of 28 expected species within Piscataway Park - South.

In addition the NPS-NCPE website indicated that among the rare, threatened, and endangered fauna are several extant amphibian populations that are not known to inhabit any National Parks in Maryland other than Piscataway Park. These include the Northern Cricket Frog (*Acris crepitans*), Cope's Gray Tree Frog (*Hyla chrysocelis*), Green Tree Frog (*Hyla cinerea*), Wood Frog (*Rana sylvatica*), and the Eastern Spadefoot Toad (*Scaphiopus holbrookii*). The Upland Chorus Frog (*Pseudacris triseriata feriarum*) is restricted to a single community within the Park, as is the Four-toed Salamander (*Hemidactylium*

scutatum). It should be noted, however, that none of these species appears in the Maryland Department of Natural Resources publication entitled *Rare, Threatened, and Endangered Animals of Maryland*.[13] The NPS-NCPE website further indicated that portions of the Park's shoreline provide a habitat for eight species of freshwater mussels, including three endangered species, and that the bald eagle (*Haliaeetus leucocephalus*), a federally listed threatened species, is known to nest in portions of Piscataway Park.

In response to the above information and in accordance with National Park Service Personnel recommendations, ECC made requests for environmental reviews of records of rare, threatened, or endangered species at the site to Ms. Lori A. Byrne, Environmental Review Coordinator, Wildlife Heritage Service, Maryland Department of Natural Resources, and Ms. Mary Ratnaswami, Chief, Endangered Species Program, U.S. Fish & Wildlife Service.

Ms. Byrne of the MD DNR responded in writing on July 5, 2004, indicating that there are no state or federal records of rare, threatened, or endangered species within the boundaries of the Subject Site. However, Ms. Byrne indicated the presence of both *Myosotis macrosperma,* and *Nemophila aphylla* (rare plant species discussed in Sections 4.5.1 and 4.6.1) and the potential presence of Forest Interior Dwelling Birds (FIDs). A copy of the MD DNR endangered species FOIA response is included in Appendix E.

Mr. G. Andrew Moser of the U.S. Fish and Wildlife Service, Threatened and Endangered Species Program, responded in writing on August 9, 2004, indicating that there are "no federally proposed or listed endangered, or threatened species within the project impact area. Therefore, no Biological Assessment or further section 7 Consultation with the U.S. Fish and Wildlife Service is required." A copy of the U.S. Fish and Wildlife Service endangered species FOIA response is included in Appendix E.

Mr. James Rosenstock, Park Ranger, National Capital Parks - East requested supplemental information, in addition to the above rare, threatened, and endangered species FOIA responses, regarding *Haliaeetus leucocephalus* (bald eagle) nesting sites in the vicinity of the Subject Site. ECC requested this information from Ms. Maricela Constantino of the U.S. Fish and Wildlife Service, Threatened and Endangered Species Program. Ms. Constantino provided a map with nesting locations, however, she indicated that the map was several years old. Ms. Constantino suggested that Mr. Glen Therres, Director of the Maryland Department of Natural Resources, Wildlife and Heritage Service may have more recent information. When ECC contacted Mr. Therres, he indicated that recent information regarding nesting sites in Piscataway Park is not available because the Park is currently within restricted airspace, limiting aerial surveys of nesting sites. Nesting locations provided by Ms. Constantino, and confirmed by Mr. Therres as being the most recent information, are presented on Figure 7. As shown on the referenced figure, the closest documented *Haliaeetus leucocephalus* nesting site is located south of Piscataway Creek and more than one mile from the Subject Site.

[13] Maryland Department of Natural Resources, Wildlife and Heritage Service, Natural Heritage Program, *Rare, Threatened, and Endangered Animals of Maryland*, December 2003.

4.7 Archaeological and Cultural Resources

The National Historic Landmark listings for Prince George's County Maryland were searched online via http://www.marylandhistoricaltrust.net for sites in the vicinity of the Subject Site. The search indicated several sites including Piscataway Park, Fort Washington, and the Accokeek Creek Site. In addition, the Maryland Historical Trust was contacted via telephone for additional information. Ms. Dixie Henry, Maryland Historical Trust, Project Review and Compliance, indicated that, due to the proximity to the Accokeek Creek Site, there was a "high potential for encountering human remains." The Accokeek Creek Site (also known as Moyaone) was listed as a National Historic landmark on October 15, 1966, and is described on the Maryland Historical Trust website[14] as follows:

> Description: This extensive tract of land at the confluence of Piscataway Creek with the Potomac River includes a series of archeological sites, ranging in date from the Late Archaic period ©. 3000 B.C.) to historic times. The earliest components at the site are represented by hunting and campsites. Later, during the Middle Woodland period ©. A.D. 800), small horticultural hamlets were established. The major component at Accokeek Creek, however, is an extensive late-16th/early-17th century village of the Piscataway Indians, referred to as Moyaone. Multiple palisade lines at this Potomac-facing village indicate numerous rebuilding episodes, and attest to a fairly lengthy occupation of the site. Four ossuaries associated with the village contained the remains of more than 1000 individuals, indicating a substantial population at Moyaone. The village appears to have been abandoned prior to Contact. At the north end of this tract on the banks of Piscataway Creek was a rectangular fort occupied by the Susquehannocks in 1674-75.
>
> Significance: Based on material excavated by Alice L.L. Ferguson in the 1930s and 1940s, and analyzed by Robert L. Stephenson in the 1950s, the Accokeek Creek site served as the basis for understanding ceramic chronology in the Middle Atlantic region. This chronology established the Early Woodland Marcey Creek/Accokeek/Popes Creek–Middle Woodland Mockley–Late Woodland Potomac Creek continuum. The village referred to as Moyaone represents the largest and last-occupied Piscataway village before the arrival of Europeans.

Additional materials were obtained from the NPS Regional Archeology Program, Museum Resource Center, located in Landover, Maryland. ECC visited the Museum Resource Center on May 27, 2004, and spoke with Ms. Karen L. Orrence, Archeologist, and Ms. Marian C. Creveling, Archeological Collections Manager. Mr. Robert C. Sonderman, Senior Staff Archeologist provided input via telephone. Relevant documents from the Museum Resource Center visit are presented in Exhibit D.

Information referenced above was discussed with Dr. Stephen R. Potter, Regional Archeologist, National Capital Region, NPS. Dr. Potter indicated a keen interest in the Subject Site area because of its proximity to the Accokeek Creek site and Moyaone village and potential prehistoric sites near the Subject Site as referenced on a U.S. Coast and Geodetic Survey Map.[15] Dr. Potter requested performance of a Phase I Archeological Survey of the Subject Site. A portion of the U.S. Coast and Geodetic Survey Map is presented as Figure 8.

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[14] http://www.marylandhistricaltrust.net

[15] U.S. Coast and Geodetic Survey Map, Annotated with Archeological Sites c. 1885-1888, National Anthropological Archives Manuscript Number 4001.

URS Corporation, Inc., (URS) of Gaithersburg, Maryland, published a draft *Phase I Archeological Survey for the Proposed Exchange Easement, Piscataway Park, Prince George's County Maryland* dated July 2004. The survey was conducted to document the presence or absence of potentially significant archeological resources in compliance with Section 106 of the National Historic Preservation Act of 1966. The *Phase I Archeological Survey for the Proposed Exchange Easement, Piscataway Park, Prince George's County Maryland* was accepted by Dr. Stephen R. Potter in memorandum to the Acting Superintendent, National Capital Parks-East received by URS on August 12, 2004.

The URS *Phase I Archeological Survey* documented research and field work performed in late June and early July 2004. URS performed 14 shovel test pits and reported that no artifacts were recovered and no archeological sites were identified. URS indicated that the lack of sites was predominately due to "the small area of coverage, the steep slopes in the upland portion of the project area, the active floodplain setting at the southern end or terminus of the project area and previous disturbance."[16] The full URS *Phase I Archeological Survey* is presented in Exhibit D.

[16] URS Corporation, Inc., *Phase I Archeological Survey for the Proposed Exchange Easement, Piscataway Park*, July 2004.

5.0 ENVIRONMENTAL IMPACTS AND MITIGATION

Numerous ecological, aesthetic, economic, visitor-use, and safety concerns have been considered in assessing the potential environmental impacts of the alternatives. There are no anticipated impacts to populations of federally listed threatened, or endangered species or to archeological or cultural resources. Table 3 provides a summary of the potential impacts of the considered alternatives. Only those resources affected by the alternatives are discussed in detail.

Table 3 - Potential Environmental Impacts of Alternatives

Resource Assessed	Alternative 1 –No Action	Alternative 2 – Exchange Parcel 1	Alternative 3 – Exchange Parcel 2
Air quality	Temporary impact during construction	Temporary impact during construction	Temporary impact during construction
Archaeological Resources	Potential impact – area not studied	Potential impact – area not studied	No impact – no resources documented
Cultural Resources	Potential impact – area not studied	Potential impact – area not studied	No impact – no resources documented
Floodplains	Potential impact to Chesapeake Bay Critical Area	No impacts	Impact to Chesapeake Bay Critical Area
Park Infrastructure	No impacts	No impacts	No impacts
Noise	Minimal impact during utility construction	Minimal impact during utility construction	Minimal impact during utility construction
Safety	Potential hazards during construction - long-term security concerns	Potential hazards during construction - long-term security concerns	Potential hazards during construction - long-term security concerns
Scenic Value	Potential loss of vegetation in a 40,300 square foot area. Some vegetation potentially will not return due to utility maintenance concerns	Potential loss of vegetation in a 22,972 square foot area. Some vegetation potentially will not return due to utility maintenance concerns	Potential loss of vegetation in a 21,002 square foot area. However, a majority of the easement utilizes a currently disturbed and non-vegetated corridor
Socio-economic Environment & Visitor Experience	No impacts	No impacts	No impacts
Community Impacts	Temporary impact during construction.	Temporary impact during construction.	Temporary impact during construction.
Environmental Justice	No impacts	No impacts	No impacts
Land Use	No impacts	No impacts	No impacts
Aesthetics	Scenic impacts and impacts to the visitor experience	Scenic impacts and impacts to the visitor experience	Scenic impacts and impacts to the visitor experience
Utilities and Services	Provision of services for the proposed Waterford Cove residential development	Provision of services for the proposed Waterford Cove residential development	Provision of storm water services for the proposed Waterford Cove residential development
Transportation	Temporary impacts during construction	Temporary impacts during construction	Temporary impacts during construction

Table 3 continued on next page

Table 3 - Potential Environmental Impacts of Alternatives
Continued

Resource Assessed	Alternative 1 –No Action	Alternative 2 – Exchange Parcel 1	Alternative 3 – Exchange Parcel 2
Surface Water Quality and Wetlands	Impact to Chesapeake Bay Critical Area - potential impacts due to vegetative cover loss over a 40,300 square foot area.	Potential impacts due to vegetative cover loss over a 22,972 square foot area	Impact to Chesapeake Bay Critical Area - impacts due to vegetative cover loss over a portion of the 21,002 square foot area (area is significantly disturbed)
Federal Listed Threatened and Endangered Species	Potential impacts - area not studied	Potential impacts - area not studied	No impacts - no resources documented
Vegetation	Loss of vegetation in a 40,300 square foot area - some vegetation will be lost to utility maintenance concerns	Loss of vegetation in a 22,972 square foot area - some vegetation will be lost to utility maintenance concerns	Loss of vegetation over portion of the 21,002 square foot area (area is significantly disturbed) - some vegetation will be lost to utility maintenance concerns
Wildlife	Loss of existing habitat in a 40,300 square foot area - some habitat will be lost due to utility maintenance activity	Loss of habitat in a 22,972 square foot area - some habitat will be lost due to utility maintenance activity	Loss of habitat over a portion of the 21,002 square foot area (area is significantly disturbed) - some habitat will be lost due to utility maintenance activity

5.1 Air Quality

The Clean Air Act requires federal land managers to protect air quality, while NPS Management Policies address the need to analyze air quality during park planning. The Park is situated in Prince George's and Charles Counties; Prince George's County is designated as a non-attainment area for ozone by the EPA. A non-attainment designation indicates that a particular area does not meet (or contributes to ambient air quality in a nearby area that does not meet) the national primary or secondary ambient air quality standard for the specified pollutant. Impacts to air quality associated with any of the alternatives would be related to short-term construction and construction traffic. Construction traffic would be localized and would not affect ozone. Similarly, construction operations would be short-term and would not affect ozone. Therefore this topic will not be analyzed further in this Assessment. Air quality and visibility in the area are typical of Prince George's and Charles Counties.[17]

5.2 Archeological and Cultural Resources

Archeology of the Subject Site (Exchange Parcel 2) and vicinity was researched extensively and a *Phase I Archeological Survey* was performed for the preferred alternative (Alternative 3) by URS Corporation, Inc. Utilization of Alternative 3 would result in no

[17] EPA Website http://www.epa.gov/oar/oaqps/greenbk/, Nonattainment Areas for Criteria Pollutants, January 2002.

impact to archeological and cultural resources as documented within URS's *Phase I Archeological Survey*.

5.3 Floodplains

Affected Environment

The Piscataway Creek Management Unit includes shoreline both north and south of Piscataway Creek. Both shorelines contain wetlands and floodplains and are located within the Chesapeake Bay Critical Area.

Impact

Alternative 1

This alternative utilizes Easement 3 which encroaches upon the Chesapeake Bay Critical Area.

Alternative 2

This alternative relinquishes the right to Easements 2 and 3 and alleviates the potential encroachment upon the Chesapeake Bay Critical Area. However, disturbance of a very steep slope during construction would make erosion a significant concern.

Alternative 3

The preferred alternative relinquishes the right to Easements 2 and 3, however, proposed Exchange Parcel 2 also encroaches upon the Chesapeake Bay Critical Area.

Mitigation

The stormwater management design includes construction of a plunge pool and rip-rap area at the stormwater outfall. The plunge pool was designed as a mitigation response for protection of downstream flora and prevention of floodplain and downstream wetland erosion. Stormwater designs and calculations show that this treatment should adequately protect downstream resources. See Exhibit A.

5.4 Park Infrastructure

No impacts are expected upon existing or future Park infrastructure with any of the alternatives.

5.5 Noise

No permanent increase in noise levels is associated with any of the alternatives. There will be a temporary increase in ambient noise levels during the construction phase of all potential alternatives. Anticipated noise levels will be mitigated by OSHA and County regulations regarding sound attenuation.

5.6 Safety

The Park has a permanent staff, and receives approximately 260,000 visitors annually. However, there are no staff and no visitor facilities within that portion of the Piscataway Creek Management Unit which lies north of Piscataway Creek. All of the alternatives will create temporary safety concerns relative to construction of services and utilities. Construction will include, but not be limited to, the use of heavy construction equipment (cranes, dozers, front-end loaders etc.) rigging, welding, painting and vehicular traffic. All activities shall take place in assigned and defined areas and in accordance with standard safety practices.

5.7 Scenic Value

Affected Environment

Piscataway Park is comprised of 4,625 acres of Coastal Plain forest and serves to protect and preserve lands which comprise the principal viewshed from Mount Vernon and Fort Washington.

Impact

Alternative 1

Under this Alternative, existing vegetation within Easements 2 and 3 may be permanently removed for installation and maintenance of services and utilities. This removal of vegetation could potentially impact the viewshed from Mount Vernon and/or Fort Washington which is not consistent with the desirable aesthetic of Piscataway Park and could potentially detract from the desired visitor experience at Piscataway Park, Mount Vernon and/or Fort Washington.

Alternative 2

Under Alternative 2, the impacts described in Alternative 1 would be reduced due to impact of a smaller area of land located approximately 1,100 feet from the shoreline. Additionally, Exchange Parcel 1 is located approximately 100 to 250 feet outside of the Chesapeake Bay Critical Area. However, this alternative presents a significant risk for erosion as it traverses a very steep slope.

Alternative 3

Under Alternative 3, the impacts described in Alternative 1 would be reduced due to impact of a smaller area of land. As previously discussed, Exchange Parcel 2 has been previously disturbed and is devoid of vegetation over a significant portion of the parcel. Exchange Parcel 2 (Alternative 3) would, however, still extend approximately 500 feet into the Chesapeake Bay Critical Area, and terminate approximately 500 feet from Piscataway Creek.

Mitigation

Mitigation measures will include installation of the stormwater discharge pipe with minimal excavation utilizing shallow trench techniques, regrading of the previously disturbed area after pipe installation to better match surrounding topography, and planting of native understory vegetation (few trees will be utilized in planting mitigation measures). The abandoned surface pipeline will be removed, and access to the restored corridor will be blocked with plantings and/or fencing to prevent inappropriate uses (all-terrain vehicles, dumping, etc.) that would cause erosion or other damage to the restored corridor. Waterside Conservation LLC will coordinate with NPS on specifications for planting mitigation measures.

5.8 Socio-Economic Environment & Visitor Experience

Affected Environment

The area in the immediate vicinity of this proposal is characterized by residential uses.

The Park receives approximately 260,000 visitors annually. Most visitation occurs during the spring, summer, and fall seasons when people are drawn to the Park for its recreational opportunities. However, the portion of Piscataway Creek Management Unit which is north of Piscataway Creek and contains the Subject Site represents approximately 3% of the total Piscataway Park area. This portion of the Park, north of the Piscataway Creek, is not staffed and no visitation facilities are available. The NPS has indicated, informally, that a trail is planned for the north shore of Piscataway Creek. The trail will follow an existing path/trail which approximately follows the existing sanitary sewer; both the sewer and path/trail alignment are shown on Figure 2.

Utilization of any of the alternatives will result in no impacts to the socio-economic climate. No significant long-term economic impacts to the surrounding community are anticipated as a result of this exchange. The proposed Waterford Cove residential development may potentially generate local economic short-term growth due to short-term construction labor. Long-term local economic growth for Prince George's county would result from revenues generated from additional property taxes and local spending resulting from construction of the residential development.

The visitor experience at Mount Vernon and/or Fort Washington should not be affected due to implementation of Alternative 3.

5.9 Community Impacts

There are no expected long-term impacts to the surrounding community from any of the alternatives. Temporary impacts during construction phases resulting in construction traffic, noise, and dust can be expected. The positive long-term effects that result include meeting the demand for services and utilities as a result of suburban growth.

The visitor experience should not be affected, as scenic impacts will be minimized through the implementation of mitigation measures (i.e. replacement plantings and regrading the previously disturbed area). The proposed right-of-way will impact less area than the existing right-of-way.

5.10 Environmental Justice

President Clinton signed Executive Order 11988, entitled "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations," on February 11, 1994. This Executive Order directs federal agencies to "make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low income populations in the United States."

Prince George's County encompasses a total area of 499 square miles (319,360 acres) and a total land area of 487 square miles (311,680 acres). According to the 2000 census, the population in the County was 801,515 persons. Prince George' County represents the second largest county in the state. The county is becoming more racially and ethnically diverse. Population by race is: 62.7% African-American; 27% White; 3.9% Asian; 0.3% American Indian/Alaska native; 0.1% Native Hawaiian/Pacific Islander; and 6% other. Median age in the county is 33.3 years. Owner occupied housing units is 61.8%. Median household income is reported as $60,850.[18] [19] No adverse human health or environmental effects are associated with either of the project alternatives evaluated in this document.

As noted, there will be slight increases in traffic and noise associated with the construction of either alternative. Although some uses of the Park may be temporarily impeded during construction, it is considered that construction of services and utilities will have a positive social and economic effect on the immediate neighborhood. Therefore, it is concluded that no disproportionately high or adverse human health or environmental effects on minority and/or low-income populations will result from either alternative.

In accordance with the Secretary of the Interior's regulations regarding "Nondiscrimination in Federally Assisted Programs" (43 CFR 17) and NPS policy, use of Piscataway Park is open to all citizens regardless of sex, creed, race, national origin, or disability.

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[18] Prince George's County Government Official Web Site, Demographics, (www.goprincegeorgescounty.com/About/Demographics/index.asp).

[19] Maryland National Capitol Parks and Planning Commission, *Research Bulletin, Current Prince George's County Statistics, Population and Housing Statistics,* September 2003.

5.11 Land Use

Affected Environment

The Park is under the jurisdiction and management of NPS, which offers "a variety of activities." At present, the Park consists of approximately 4,625 acres of mixed hardwood forest within the Piscataway Creek watershed. In addition to the natural resources, Piscataway Park contains picnic facilities, a dock and the National Colonial Farm. However, the portion of the Piscataway Park Management Unit located north of Piscataway Creek represents approximately 3% of the total Piscataway Park area, is not staffed, and does not provide visitation facilities.

Impact

Alternative 1

There would be no change to land use under Alternative 1.

Alternative 2

Under Alternative 2, there would be a net change in land use as proposed Exchange Parcel 1 would impact approximately 17,300 square feet less than Easements 2 and 3. The NPS and Waterside Conservation LLC will exchange easement parcels of dissimilar size with the net easement area decreasing.

Alternative 3

Under Alternative 3, there would be a net change in land use as utilization of proposed Exchange Parcel 2 would impact approximately 19,300 square feet less than Easement 2 and Easement 3. The NPS and Waterside Conservation LLC will exchange easement parcels of dissimilar size with the net easement area decreasing.

5.12 Aesthetics

Affected Environment

Piscataway Park is a forested, green space in the midst of a rapidly expanding suburban area. The existing aesthetics of the Park are such that it offers numerous opportunities for quiet, passive recreational uses. The large expanse of parkland preserves the historic viewsheds of Mt. Vernon and Fort Washington. This large expanse of forested land also contributes positively to ambient air quality.

Impact

Alternative 1

Use of existing Easements 2 and 3 would potentially impact 40,300 square feet and potentially detract from the viewshed from Mount Vernon and/or Fort Washington. In

addition, use of existing Easements 2 and 3 would impinge upon the Chesapeake Bay Critical Area.

Alternative 2

Under Alternative 2, aesthetic values would be impacted through disturbance of approximately 22,972 square feet. In addition, potential future erosion along the very steep alignment is a significant concern.

Alternative 3

Under Alternative 3, aesthetic values would be impacted through disturbance of 21,002 square feet. In addition, the proposed right-of-way would impinge upon the Chesapeake Bay Critical Area.

Mitigation

Under Alternative 3, the impacts to aesthetic values would be mitigated through utilizing a smaller, previously disturbed, area (21,002 square feet), regrading of the previously disturbed area, planting the easement alignment with native understory vegetation, removing the abandoned surface pipeline, restricting access to the restored corridor with plantings and/or fencing to prevent inappropriate activity, and installation of a rip-rap plunge pool at the outfall terminus.

5.13 Utilities & Services

No impacts to existing utility services are expected under any of the alternatives.

5.14 Transportation

No impacts to existing transportation services are expected under any of the alternatives.

5.15 Surface Water Quality & Wetlands

Affected Environment

Piscataway Park lies within the watershed of and borders Piscataway Creek. As such, construction in the Park has the potential to affect Piscataway Creek and associated floodplains and wetlands. No impacts are expected to the hydrogeologic or geologic characteristics of the land under any of the alternatives. Erosion control measures (i.e. straw bale dikes, soil berms, silt fence, etc.) would be utilized during the construction phase under any of the alternatives.

Impacts

Alternative 1

Under Alternative 1, use of existing Easements 2 and 3 would potentially impact 40,300 square feet of land which lies within a natural drainage swale. Construction within Easements 2 and 3 would encroach upon the Chesapeake Bay Critical Area and most likely create a significant soil erosion problem.

Alternative 2

Under Alternative 2, the use of the proposed right-of-way would impact 22,972 square feet which lies nearly entirely upon a very steep slope. Utilizing this alignment is also expected to generate significant erosional problems post-construction.

Alternative 3

Under Alternative 3, the use of the proposed right-of-way will impact 21,002 square feet which lies upon a shallow slope, follows an existing disturbed alignment, and does not lie within a swale. The proposed right-of-way will impinge upon the Chesapeake Bay Critical Area.

Mitigation

Alternatives 1 and 2 were dismissed early in discussions between NPS and Waterside Conservation LLC in large part due to concerns over post-construction erosion within the proposed alignments . The design presented by Waterside Conservation LLC as Alternative 3 includes mitigation measures which will potentially improve the net erosion potential of the Subject Site area. Mitigation measures include very shallow pipe installation, regrading of the disturbed alignment, and replanting of understory vegetation. These mitigation measures will reduce erosion potential along a majority of the alignment. In addition, construction of a plunge pool at the outfall will mitigate impacts to downstream rare, threatened, and endangered plants, floodplains, wetlands and Piscataway Creek.

5.16 Federal Listed Threatened & Endangered Species

Affected Environment

A summary of the rare, threatened, or endangered flora and fauna is provided in Section 4.6. Relevant information indicates that there are no documented federally listed rare, threatened, or endangered species within the Subject Site area. Four species of state listed rare, threatened, or endangered plants were identified within the boundaries of the Wetland Studies *Rare, Threatened, and Endangered Plant Search*.

Impact

As presented in Section 4.6.1 the Wetland Studies *Rare, Threatened, and Endangered Plant Search* confirmed the assertion of the *Biological Inventories Report* that *Nemophila aphylla* and *Myosotis macrosperma* are widespread in the vicinity of the Subject Site (that area referred to in the report as Piscataway Park Annex). A review of all reports indicates that the only rare, threatened, or endangered plant identified within the boundary of Exchange Parcel 2 is an unidentified species of *Matelea* (see Figure 6).

Mitigation

To protect downstream rare, threatened, or endangered species, the NPS will monitor impacts to plant populations during the first year following construction, and Waterside Conservation LLC will adjust/improve the outfall as needed to create the best possible conditions. Mitigation measures for downstream, state listed rare, threatened, or endangered plants include installation of the rip-rap plunge pool at the outfall terminus. Mitigation measures for the single *Matelea* plant will include fencing of the plant from the construction area to prevent damage and/or removal.

5.17 Vegetation

Affected Environment

Piscataway Park contains approximately 4,625 acres of Coastal Plain forest. The native vegetation within the proposed exchange areas consists of mixed-hardwood conifer forest with tulip poplar, oak, pine and beech species.

Impact

Alternative 1

Under Alternative 1, use of existing Easements 2 and 3 would impact 40,300 square feet of currently vegetated area.

Alternative 2

Under Alternative 2, use of Exchange Parcel 1 would impact 22,972 square feet of currently vegetated area.

Alternative 3

Under Alternative 3, use of Exchange Parcel 2 would impact 21,002 square feet, a significant portion of which is currently disturbed and not vegetated.

Mitigation

Plantings will be utilized as a mitigation measure and as a means to reclaim the currently disturbed and eroding alignment under Alternative 3. Native understory vegetation will be required and the exact specifications will be implemented under NPS guidance. Non-native and exotic species would be prohibited. Invasive non-native and exotic species will be removed from the restored area (coordinated with the NPS) during the first year after construction.

5.18 Wildlife

Affected Environment

Piscataway Park is home to a diverse group of organisms including fish, amphibians, reptiles, birds, and mammals. Small mammals, reptiles and amphibians are abundant. Bald eagles, are known to nest in Piscataway Park, south of Piscataway Creek (see Figure 7).

Impact

Alternative 1

Under Alternative 1, use of existing Easements 2 and 3 would potentially impact 40,300 square feet of wildlife habitat.

Alternative 2

Under Alternative 2, use of Exchange Parcel 1 would potentially impact 22,972 square feet of wildlife habitat.

Alternative 3

Under Alternative 3, use of Exchange Parcel 2 would potentially impact 21,002 square feet of potential wildlife habitat, however, a significant portion of this parcel has been previously disturbed and does not represent true wildlife habitat.

Mitigation

Plantings and regrading will be utilized as mitigation measures and as a means to reclaim the currently disturbed and eroding alignment under Alternative 3. These mitigation measures will potentially return the disturbed alignment to viable wildlife habitat.

6.0 PUBLIC PARTICIPATION

6.1 Scoping

Discussion of easement exchange between Waterside Conservation LLC and NPS for provision of stormwater management began informally with representatives of Waterside Conservation LLC, National Park Service, Prince George's County, Loiederman Soltesz Associates, Wetland Studies and Solutions and ECC. Eventually, it became apparent that an Environmental Assessment would be required and additional parties became involved.

- Loiderman Soltesz Associates provided storm water management design and surveying services.
- The Maryland Historic Trust, the NPS Regional Archeology Program Museum Resource Center, and URS Corporation all contributed to an understanding of the archeological and cultural resources in the area.
- URS Corporation prepared a Phase I Archeological Survey Report which Dr. Stephen R. Potter, Regional Archeologist, National Capital Region, NPS reviewed and approved.
- Wetland Studies and Solutions provided wetland delineations and rare plant studies.
- Maryland Department of Natural Resources and the U.S. Fish and Wildlife Service were consulted for information on rare, threatened and endangered wildlife.
- The Maryland Critical Areas Commission reviewed all plans and relevant reports.

A comprehensive list of all consulted interested parties, specialists, governmental agencies, and subcontractors is presented in Section 7.

6.2 Public Involvement and Notification

The proposed easement exchange between Waterside Conservation LLC and NPS for provision of stormwater management has been submitted for review to local, state and federal agencies including Prince George's County Plan Review, Maryland Department of the Environment Review, Maryland Critical Areas and National Parks East. Upon final review by NPS, this Environmental Assessment will be made available for public review and comment for a period of 30 days. The complete Environmental Assessment, including exhibits, will be available for review at the following location:

National Capital Parks - East
1900 Anacostia Drive, S.E.
Washington, DC 20020-6722

In addition, this Environmental Assessment, not including the Exhibits, will be available for review online at http://www.nps.gov/pisc/ and at the Fort Washington Marina.

Letters alerting governmental representatives, agencies, and civic associations to the publication of this Environmental Assessment and its public review and comment period will

be mailed. In addition, a Public Notice will be posted in the Washington Post; a copy of the Public Notice is included as Appendix G.

6.3 Comments, Concerns, Issues

Currently, no comments, concerns or issues have been raised regarding this Environmental Assessment, in whole or part. However, this document will undergo a 30 day public review period beginning on September 16, 2004. Comments, concerns or, questions may be submitted to NPS via e-mail to james_rosenstock@nps.gov.

7.0 CONSULTED PARTIES

- Ms. Varna G. Boyd, Principal Anthropologist, URS Corporation, Inc. 200 Orchard Ridge Drive, Suite 101, Gaithersburg, Maryland, 20878.
- Ms. Lori A. Byrne, Environmental Review Coordinator, Wildlife and Heritage Service, Maryland Department of Natural Resources, Tawes State Office Building, 580 Taylor Avenue, Annapolis, Maryland, 21401.
- Ms. Maricela Constantino, Threatened and Endangered Species Program, United States Department of the Interior, Fish and Wildlife Service, Chesapeake Bay Field Office, 177 Admiral Cochrane Drive, Annapolis, Maryalnd 21401.
- Mr. Joseph A. Cook, Chief, Land Resources Program Center, NPS, National Capital Region, 1100 Ohio Drive, S.W., Washington, D.C. 20024.
- Ms. Marian C. Creveling, Archeological Collections Manager, Regional Archeology Program Museum Resource Center, 3300 Hubbard Road, Landover, Maryland, 20785.
- Environmental Protection Agency website.
- Ms. Dixie Henry, Project Review and Compliance, Maryland Historical Trust, Maryland Historical Trust Library, 100 Community Place, Crownsville, Maryland 21032.
- Ms. Lisa A. Hoerger, Natural Resources Planner, State of Maryland, Critical Area Commission, Chesapeake and Atlantic Coastal Bays, 1804 West Street, Suite 100, Annapolis, Maryland, 21401.
- Mr. Ed Keohane, P.E., Assistant Project Manager, Loiederman Soltesz Associates, Inc., 4266 Forbes Boulevard, Lanham, Maryland 20706.
- Maryland Historical Trust website.
- Maryland-National Capital Park and Planning Commission website.
- Mr. G. Andrew Moser, Acting Program Supervisor, Threatened and Endangered Species, United States Department of the Interior, Fish and Wildlife Service, Chesapeake Bay Field Office, 177 Admiral Cochrane Drive, Annapolis, MD 21401.
- National Park Service, National Capital Parks East website.

- Ms. Cynthia C. Nethen, Project Manager, Nontidal Wetlands and Waterways Division, Maryland Department of the Environment, 1800 Washington Boulevard, Baltimore, Maryland 21230.

- Ms. Karen L. Orrence, Archeologist, Regional Archeology Program Museum Resource Center, 3300 Hubbard Road, Landover, Maryland, 20785.

- Dr. Stephen R. Potter, Regional Archeologist, National Capital Region, National Park Service, 1100 Ohio Drive, SW, Washington, D.C. 20242.

- Prince George's County website.

- Ms. Mary Ratnaswami, Chief, Endangered Species Program, U.S. Fish and Wildlife Service, 177 Admiral Cochrane Drive, Annapolis, Maryland 21401.

- Mr. James Rosenstock, Park Ranger, Piscataway Park, National Capital Parks -East, National Park Service, 1900 Anacostia Drive, S.E., Washington D.C. 20020.

- Ms. Susan Rudy, Natural Resources Program Manager, National Capital Parks - East, National Park Service, 1900 Anacostia Drive, S.E., Washington D.C. 20020.

- Mr. Richard B. Sellars III, P.E., Project Manager, Loiederman Soltesz Associates, Inc., 4266 Forbes Boulevard, Lanham, Maryland 20706.

- Mr. Ian F. Smith, P.E., Project Engineer, Wetland Studies and Solutions, Inc., 14088-M Sullyfield Circle, Chantilly, Virginia 20151.

- Mr. Robert C. Sonderman, Senior Staff Archeologist, Regional Archeology Program Museum Resource Center, 3300 Hubbard Road, Landover, Maryland, 20785.

- Mr. Jim Stasz, Maryland National Capital Parks and Planning Commission.

- Mr. Richard Thompson, Prince George's County Department of Environmental Resources.

- Dr. Robert D. Wall, Principal Investigator, URS Corporation, Inc. 200 Orchard Ridge Drive, Suite 101, Gaithersburg, Maryland, 20878.

- Mr. Michael Wilderman, National Capital Parks - East, National Park Service, 1900 Anacostia Drive, S.E., Washington D.C. 20020.

8.0 REVIEWERS

- Mr. Joseph A. Cook, Chief, Land Resources Program Center, NPS, National Capital Region, 1100 Ohio Drive, S.W., Washington, D.C. 20024.

- Mr. James Rosenstock, Park Ranger, Piscataway Park, National Capital Parks -East, National Park Service, 1900 Anacostia Drive, S.E., Washington D.C. 20020.

- Ms. Susan Rudy, Natural Resources Program Manager, National Capital Parks - East, National Park Service, 1900 Anacostia Drive, S.E., Washington D.C. 20020.

- Mr. Michael Wilderman, National Capital Parks - East, National Park Service, 1900 Anacostia Drive, S.E., Washington D.C. 20020.

Appendix A

Legal Description Easements 2 and 3

Appendix B

Legal Description of Exchange Parcel 1 (Alternative 2)

Appendix C

Map of Exchange Parcel 2 (Alternative 3)

Appendix D

No Impact to Wetlands
Letter from
Nontidal Wetlands and Waterways Division of the
Water Management Administration
Maryland Department of the Environment

Appendix E

FOIA Responses for
Rare, Threatened, or Endangered Fauna

Appendix F

Critical Areas Commission Correspondence

Appendix G

Public Notice